[4910-13-U]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39 [66 FR 31121 6/11/2001]

[Docket No. 98-NM-326-AD; Amendment 39-12163; AD 2001-06-16]

RIN 2120-AA64

Airworthiness Directives; McDonnell Douglas Model DC-9-80 Series Airplanes and Model MD-88 Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule; correction.

SUMMARY: This document corrects information in an existing airworthiness directive (AD) that applies to all McDonnell Douglas Model DC-9-80 series airplanes and Model MD-88 airplanes. That AD currently requires revisions to the Airplane Flight Manual (AFM) and installation of inspection aids on the wing upper surfaces. That AD also requires, among other actions, installation of an overwing heater blanket system or primary upper wing ice detection system, and installation of a heater protection panel or an equipment protection device on certain overwing heater blanket systems. This document corrects an incorrect paragraph reference. This correction is necessary to ensure that operators are aware of an incorrect paragraph reference in paragraph (d)(2)(ii)(A) of the existing AD.

DATES: Effective May 7, 2001.

The incorporation by reference of certain publications listed in the regulations was approved previously by the Director of the Federal Register as of January 17, 1992 (57 FR 2014, November 12, 1998).

The incorporation by reference of certain other publications listed in the regulations was approved previously by the Director of the Federal Register as of May 7, 2001 (66 FR 17499, April 2, 2001).

ADDRESSES: The service information referenced in this AD may be obtained from Boeing Commercial Aircraft Group, Long Beach Division, 3855 Lakewood Boulevard, Long Beach, California 90846, Attention: Data and Service Management, Dept. C1-L5A (D800-0024). This information may be examined at the Federal Aviation Administration (FAA), Transport Airplane Directorate, Rules Docket, 1601 Lind Avenue, SW., Renton, Washington; or at the FAA, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.FOR FURTHER INFORMATION CONTACT: Albert Lam, Aerospace Engineer, Systems and Equipment Branch, ANM-130L, FAA, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California 90712-4137; telephone (562) 627-5346; fax (562) 627-5210.

SUPPLEMENTARY INFORMATION: On March 23, 2001, the Federal Aviation Administration (FAA) issued AD 2001-06-16, amendment 39-12163 (66 FR 17499, April 2, 2001), which applies to all McDonnell Douglas Model DC-9-80 series airplanes and Model MD-88 airplanes. That AD supersedes an existing AD to continue to require revisions to the Airplane Flight Manual (AFM) and installation of inspection aids on the wing upper surfaces. That AD also requires, among other actions, installation of an overwing heater blanket system or primary upper wing ice detection

system, and installation of a heater protection panel or an equipment protection device on certain overwing heater blanket systems. That AD was prompted by incidents in which ice accumulation on the wing upper surfaces shed into the engines during takeoff. The actions required by that AD are intended to prevent ice accumulation on the wing upper surfaces, which could result in ingestion of ice into one or both engines and consequent loss of thrust from one or both engines.

Need for the Correction

As discussed in the preamble of AD 2001-06-16, the FAA deleted paragraph (f)(1)(iii) and other subparagraphs of the supplemental NPRM from the final rule. Although we deleted these paragraphs, we inadvertently did not update an associated paragraph reference in paragraph (d)(2)(ii)(A) of AD 2001-06-16. As a result, paragraph (d)(2)(ii)(A) incorrectly references paragraph (f)(1)(iii)(B) for installation of an equipment protective device (EPD); the correct reference is paragraph (f)(2)(i).

The FAA has determined that a correction to AD 2001-06-16 is necessary to revise an incorrect paragraph reference in paragraph (d)(2)(ii)(A) of AD 2001-06-16.

Correction of Publication

This document corrects the error and correctly adds the AD as an amendment to section 39.13 of the Federal Aviation Regulations (14 CFR 39.13).

The AD is reprinted in its entirety for the convenience of affected operators. The effective date of the AD remains May 7, 2001.

Since this action only corrects an incorrect paragraph reference, it has no adverse economic impact and imposes no additional burden on any person. Therefore, the FAA has determined that notice and public procedures are unnecessary.

List of Subject in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Correction

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Corrected]

2. Section 39.13 is amended by correctly adding the following airworthiness directive (AD):

AIRWORTHINESS DIRECTIVE

Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
**Federal Aviation
Administration**

We post ADs on the internet at "av-info.faa.gov"

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

CORRECTION

2001-06-16 MCDONNELL DOUGLAS: Amendment 39-12163. Docket 98-NM-326-AD. Supersedes AD 92-03-02, Amendment 39-8156.

Applicability: All Model DC-9-81, -82, -83, and -87 series airplanes; and Model MD-88 airplanes; certificated in any category.

Note 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (i)(1) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent ice accumulation on the wing upper surfaces, which could result in ingestion of ice into one or both engines and consequent loss of thrust from one or both engines, accomplish the following:

RESTATEMENT OF REQUIREMENTS OF AD 92-03-02:
Airplane Flight Manual Revision

(a) Within 10 days after January 17, 1992 (the effective date of AD 92-03-02, amendment 39-8156), revise the Limitations Section of the FAA-approved Airplane Flight Manual (AFM) to include the following. This may be accomplished by inserting a copy of this AD in the AFM.

"Ice on Wing Upper Surfaces

CAUTION

Ice shedding from the wing upper surface during takeoff can cause severe damage to one or both engines, leading to surge, vibration, and complete thrust loss. The formation of ice can occur on wing surfaces during exposure of the airplane to normal icing conditions. Clear ice can also occur on the wing upper surfaces when cold-soaked fuel is in the main wing fuel tanks, and the airplane is exposed to conditions of high humidity, rain, drizzle, or fog at ambient temperatures well above freezing. Often, the ice accumulation is clear and difficult to detect visually. The ice forms most frequently on the inboard, aft corner of the main wing tanks. [END OF CAUTIONARY NOTE]

The wing upper surfaces must be physically checked for ice when the airplane has been exposed to conditions conducive to ice formation. Takeoff may not be initiated unless the flight crew verifies that a visual check and a physical (hands-on) check of the wing upper surfaces have been accomplished, and that the wing is clear of ice accumulation when any of the following conditions occur:

(1) When the ambient temperature is less than 50 degrees F and high humidity or visible moisture (rain, drizzle, sleet, snow, fog, etc.) is present;

(2) When frost or ice is present on the lower surface of either wing;

(3) After completion of de-icing.

When inspection aids (i.e. tufts, decals, mount pads, painted symbols, and paint stripes) are installed in accordance with McDonnell Douglas MD-80 Service Bulletin 30-59, the physical check may be made by assuring that all installed tufts move freely.

NOTE

This limitation does not relieve the requirement that aircraft surfaces are free of frost, snow, and ice accumulation, as required by Federal Aviation Regulations Sections 91.527 and 121.629. [END OF NOTE]"

AFM Configuration Deviation List Revision

(b) Within 10 days after January 17, 1992, revise the Configuration Deviation List (CDL) Appendix of the FAA-approved AFM to include the following. This may be accomplished by inserting a copy of this AD in the AFM.

"30-80-01 Triangular Decal and Tuft Assemblies

Up to two (2) decals or tufts per side may be missing, provided:

a) At least one decal and tuft on each side is located along the aft spar line; and

b) The tufts are used for performing the physical check to determine that the upper wing is free of ice by observing that the tufts move freely.

Up to eight (8) decals and/or tufts may be missing, provided:

a) Takeoff may not be initiated unless the flight crew verifies that a physical (hands-on) check is made of the upper wing in the location of the missing decals and/or tufts to assure that there is no ice on the wing when icing conditions exist;

OR

b) When the ambient temperature is more than 50 degrees F."

Installation of Inspection Aids

(c) Within 30 days after January 17, 1992, install inspection aids (i.e., tufts, decals, mount pads, painted symbols, and paint stripes) on the inboard side of the wings' upper surfaces, in accordance with McDonnell Douglas Service Bulletin 30-59, dated September 18, 1989; Revision 1, dated January 5, 1990; or Revision 2, dated August 15, 1990.

NEW REQUIREMENTS OF THIS AD:

Repetitive Tests and One-Time Inspection

(d) For airplanes on which an overwing heater blanket system was installed without installation of a heater protection panel (HPP) or an equipment protection device (EPD) prior to the effective date of this AD: Within 60 days after the effective date of this AD, accomplish the actions specified in paragraph (d)(1) or (d)(2) of this AD, as applicable.

(1) For airplanes on which the overwing heater blanket system was installed in accordance with McDonnell Douglas Service Bulletin MD80-30-071, Revision 02, dated February 6, 1996; or McDonnell Douglas Service Bulletin MD80-30-078, Revision 01, dated April 8, 1997: Accomplish paragraphs (d)(1)(i) and (d)(1)(ii) of this AD.

(i) Remove secondary access covers, and perform a one-time detailed visual inspection to detect discrepancies (mechanical damage or punctures in the upper skin of the blanket, prying damage on the panel, and fuel leakage) of the overwing heater blanket, in accordance with McDonnell Douglas Alert Service Bulletin MD80-30A087, dated September 22, 1997. And,

(ii) Accomplish paragraph (d)(1)(ii)(A) or (d)(1)(ii)(B) of this AD.

(A) Perform dielectric withstanding voltage and resistance tests in accordance with McDonnell Douglas Alert Service Bulletin MD80-30A087, dated September 22, 1997. Repeat the tests thereafter at intervals not to exceed 150 days, until installation of an HPP in accordance with paragraph (f)(1)(i) or (f)(1)(ii) of this AD, as applicable.

(B) Deactivate the overwing heater blanket system until accomplishment of dielectric withstanding voltage and resistance tests specified in paragraph (d)(1)(ii)(A). If the overwing heater blanket system is deactivated as provided by this paragraph, continue to accomplish the requirements of paragraphs (a), (b), and (c) of this AD.

Note 2: For the purposes of this AD, a detailed visual inspection is defined as: "An intensive visual examination of a specific structural area, system, installation, or assembly to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at intensity deemed appropriate by the inspector. Inspection aids such as mirror, magnifying lenses, etc., may be used. Surface cleaning and elaborate access procedures may be required."

(2) For airplanes on which the overwing heater blanket system was installed in accordance with TDG Aerospace, Inc., STC SA6042NM: Accomplish paragraphs (d)(2)(i) and (d)(2)(ii) of this AD.

(i) Remove secondary access covers, and perform a one-time detailed visual inspection to detect discrepancies (mechanical damage or punctures in the upper skin of the blanket, prying damage on the panel, and fuel leakage) of the overwing heater blanket, in accordance with McDonnell Douglas Alert Service Bulletin MD80-30A087, dated September 22, 1997. And,

(ii) Accomplish paragraph (d)(2)(ii)(A) or (d)(2)(ii)(B) of this AD.

(A) Perform dielectric withstanding voltage and resistance tests in accordance with McDonnell Douglas Alert Service Bulletin MD80-30A087, dated September 22, 1997. Repeat the tests thereafter at intervals not to exceed 150 days, until installation of an EPD in accordance with paragraph (f)(2)(i) of this AD.

(B) Deactivate overwing heater blanket system until accomplishment of dielectric withstanding voltage and resistance tests specified in paragraph (d)(2)(ii)(A). If the overwing heater blanket system is deactivated as provided by this paragraph, continue to accomplish the requirements of paragraphs (a), (b), and (c) of this AD.

Corrective Action

(e) If any discrepancy is detected during any inspection or test performed in accordance with paragraph (d) of this AD, prior to further flight, repair or replace the affected heater blanket, in accordance with McDonnell Douglas Alert Service Bulletin MD80-30A087, dated September 22, 1997; except as provided in paragraph (h) of this AD.

Note 3: McDonnell Douglas Alert Service Bulletin MD80-30A087, dated September 22, 1997, references TDG Aerospace Document E95-451, Revision B, dated January 31, 1996, as an additional source of service information for accomplishment of repair or replacement of the overwing heater blanket.

Installation of Overwing Heater Blanket or Primary Upper Wing Ice Detection System

(f) Within 3 years after the effective date of this AD, do the requirements of either paragraph (f)(1) or (f)(2) of this AD.

(1) Do the actions specified in paragraph (f)(1)(i) or (f)(1)(ii) of this AD, as applicable.

(i) For airplanes listed in Group 1 in McDonnell Douglas Service Bulletin MD80-30-090, dated October 19, 1999: Install an overwing heater blanket system in accordance with McDonnell Douglas Service Bulletin MD80-30-071, Revision 02, dated February 6, 1996; and modify and reidentify the existing HPP in accordance with McDonnell Douglas Service Bulletin MD80-30-090. Modification of the existing HPP in accordance with this paragraph constitutes terminating action for the repetitive inspections required by (d)(1)(ii)(A) of this AD.

(ii) For airplanes listed in Group 2 in McDonnell Douglas Service Bulletin MD80-30-090, dated October 19, 1999: Install an overwing heater blanket system in accordance with McDonnell Douglas Service Bulletin MD80-30-078, Revision 01, dated April 8, 1997; and install an HPP and associated wiring in accordance with McDonnell Douglas Service Bulletin MD80-30-090. Installation of an HPP and associated wiring in accordance with this paragraph constitutes terminating action for the repetitive inspections required by (d)(1)(ii)(A) of this AD.

Note 4: For other airplanes, accomplishment of the requirements of paragraph (f)(1)(i) or (f)(1)(ii) of this AD may be acceptable per paragraph (i)(1) of this AD.

(2) Accomplish the actions specified in either paragraph (f)(2)(i), (f)(2)(ii), or (f)(2)(iii) of this AD.

(i) Install an overwing heater blanket system, and install an EPD that provides a circuit protection function to the overwing heater blanket, in accordance with a method approved by the Manager, Los Angeles Aircraft Certification Office (ACO), FAA. Installation of an EPD in accordance with this paragraph constitutes terminating action for the repetitive inspections required by (d)(2)(ii)(A) of this AD.

Note 5: Installation of an overwing heater blanket system and installation of an EPD that provides a circuit protection function to the overwing heater blanket, in accordance with TDG Aerospace, Inc., SA6042NM, or TDG Master Drawing List (MDL) E93-104, Revision R, dated October 25, 2000; is an approved means of compliance with the requirements of paragraph (f)(2)(i) of this AD

(ii) Install an overwing heater blanket system in accordance with a method approved by the Manager, Los Angeles ACO.

Note 6: Installation of an overwing heater blanket system in accordance with AlliedSignal STC SA6061NM, is an approved means of compliance with the requirements of paragraph (f)(2)(ii) of this AD.

(iii) Install an FAA-approved primary upper wing ice detection system in accordance with a method approved by the Manager, Los Angeles ACO.

Note 7: Boeing (McDonnell Douglas) has received FAA approval of an acceptable primary upper wing ice detection system. This modification has been assigned a Boeing (McDonnell Douglas) service bulletin number but, at this time, no service bulletin is available.

AFM Revision

(g) Except as provided by paragraph (h) of this AD, prior to further flight after accomplishment of the installation required by paragraph (f)(1) or (f)(2) of this AD, revise the Limitations Section of the FAA-approved AFM to include the following. This may be accomplished by inserting a copy of this AD in the AFM. After accomplishment of the installation required by paragraph (f)(1) or (f)(2) of this AD and this AFM revision, the AFM revisions required by paragraphs (a) and (b) of this AD may be removed from the AFM, and the inspection aids required by paragraph (c) of this AD may be removed from the airplane.

"Ice on Wing Upper Surfaces

CAUTION

Ice shedding from the wing upper surface during takeoff can cause severe damage to one or both engines, leading to surge, vibration, and complete thrust loss. The formation of ice can occur on wing surfaces during exposure of the airplane to normal icing conditions. Clear ice can also occur on the wing upper surfaces when cold-soaked fuel is in the main wing fuel tanks, and the airplane is exposed to conditions of high humidity, rain, drizzle, or fog at ambient temperatures well above freezing. Often, the ice accumulation is clear and difficult to detect visually. The ice forms most frequently on the inboard, aft corner of the main wing tanks. [END OF CAUTIONARY NOTE]"

(h) An airplane may be operated with an inoperative overwing heater blanket or primary upper wing ice detection system for 10 days per the Master Minimum Equipment List (MMEL), provided that the actions specified in paragraphs (h)(1), (h)(2), and (h)(3) of this AD are done before further flight.

(1) Revise the Limitations Section of the FAA-approved AFM to include the following. This may be accomplished by inserting a copy of this AD in the AFM.

"Ice on Wing Upper Surfaces

CAUTION

The wing upper surfaces must be physically checked for ice when the airplane has been exposed to conditions conducive to ice formation. Takeoff may not be initiated unless the flight crew verifies that a visual check and a physical (hands-on) check of the wing upper surfaces have been accomplished, and that the wing is clear of ice accumulation when any of the following conditions occur:

(1) When the ambient temperature is less than 50 degrees F and high humidity or visible moisture (rain, drizzle, sleet, snow, fog, etc.) is present;

(2) When frost or ice is present on the lower surface of either wing;

(3) After completion of de-icing.

When inspection aids (i.e. tufts, decals, mount pads, painted symbols, and paint stripes) are installed in accordance with McDonnell Douglas MD-80 Service Bulletin 30-59, the physical check may be made by assuring that all installed tufts move freely.

NOTE

This limitation does not relieve the requirement that aircraft surfaces are free of frost, snow, and ice accumulation, as required by Federal Aviation Regulations Sections 91.527 and 121.629. [END OF NOTE]"

(2) Revise the CDL Appendix of the FAA-approved AFM to include the following. This may be accomplished by inserting a copy of this AD in the AFM.

"30-80-01 Triangular Decal and Tuft Assemblies

Up to two (2) decals or tufts per side may be missing, provided:

a) At least one decal and tuft on each side is located along the aft spar line; and

b) The tufts are used for performing the physical check to determine that the upper wing is free of ice by observing that the tufts move freely.

Up to eight (8) decals and/or tufts may be missing, provided:

a) Takeoff may not be initiated unless the flight crew verifies that a physical (hands-on) check is made of the upper wing in the location of the missing decals and/or tufts to assure that there is no ice on the wing when icing conditions exist;

OR

b) When the ambient temperature is more than 50 degrees F."

(3) Install inspection aids (i.e., tufts, decals, mount pads, painted symbols, and paint stripes) on the inboard side of the wings' upper surfaces, in accordance with McDonnell Douglas Service Bulletin 30-59, dated September 18, 1989; Revision 1, dated January 5, 1990; or Revision 2, dated August 15, 1990.

Alternative Methods of Compliance

(i) (1) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Los Angeles ACO, FAA. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Los Angeles ACO.

(2) The following alternative methods of compliance (AMOC) were approved previously per AD 92-03-02, amendment 39-8156, and are approved as AMOC's with the indicated paragraphs of this AD:

(i) Installation of a non-skid, striped triangular symbol per Option 5 of McDonnell Douglas Service bulletin MD80-30-059, Revision 4 though Revision 7, is approved as an AMOC with paragraph (b) of this AD.

(ii) Revision of the Configuration Deviation List (CDL) Appendix of the AFM by inserting a copy of CDL Appendix, Section I, Page 2A, dated March 10, 1993, into the AFM, is approved as an AMOC with paragraph (c) of this AD.

Note 8: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Los Angeles ACO.

Special Flight Permits

(j) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(k) The actions required by paragraphs (c), (d), (e), (f)(1), and (h)(3) of this AD shall be done in accordance with the applicable service document identified in Table 1 of this AD.

Table 1: Referenced Service Documents.

Service Document	Revision Level	Date
McDonnell Douglas Service Bulletin 30-59	Original	September 18, 1989
McDonnell Douglas Service Bulletin 30-59	1	January 5, 1990
McDonnell Douglas Service Bulletin 30-59	2	August 15, 1990
McDonnell Douglas Alert Service Bulletin MD80-30A087	Original	September 22, 1997
McDonnell Douglas Service Bulletin MD80-30-090	Original	October 19, 1999
McDonnell Douglas Service Bulletin MD80-30-078	01	April 8, 1997
McDonnell Douglas Service Bulletin MD80-30-071	02	February 6, 1996

(1) The incorporation by reference of McDonnell Douglas Service Bulletin 30-59, dated September 18, 1989; McDonnell Douglas Service Bulletin 30-59, Revision 1, dated January 5, 1990; and McDonnell Douglas Service Bulletin 30-59, Revision 2, dated August 15, 1990; was approved previously by the Director of the Federal Register as of January 17, 1992 (57 FR 2014, January 17, 1992).

(2) The incorporation by reference of the remaining service bulletins listed in Table 1 of this AD, was approved previously by the Director of the Federal Register as of May 7, 2001 (66 FR 17499, April 2, 2001).

(3) Copies may be obtained from Boeing Commercial Aircraft Group, Long Beach Division, 3855 Lakewood Boulevard, Long Beach, California 90846, Attention: Data and Service Management, Dept. C1-L5A (D800-0024). Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the FAA, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

Effective Date

(l) The effective date of this amendment remains May 7, 2001.

FURTHER INFORMATION CONTACT: Albert Lam, Aerospace Engineer, Systems and Equipment Branch, ANM-130L, FAA, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California 90712-4137; telephone (562) 627-5346; fax (562) 627-5210.

Issued in Renton, Washington, on May 30, 2001.
Vi L. Lipski, Manager, Transport Airplane Directorate, Aircraft Certification Service.